Universal Hepatitis B Birth Dose in New York City

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Perinatal Hepatitis B Infection

- HBsAg (+) infant, age >1-24 months, born to HBsAg (+) mother
  - Vertical transmission: transmission of hepatitis B virus occurs during birth, from mother to infant
  - Route of transmission: mucosal exposure to infected blood and other bodily fluids
Clinical Presentation of Hepatitis B by Age of Infection

Prevention of Perinatal Hepatitis B

• Post Exposure Prophylaxis (PEP) and Completion of Hepatitis B Series
  – Birth: 1st dose single antigen vaccine and HBIG (Hepatitis B immune globulin)
    • Given within 12 hours of birth
  – 1-2 months: 2nd dose HBV (combination after 6 wks)
    • Given 4 weeks after 1st dose
  – 6 months: 3rd dose HBV may be the combination vaccine
    • Given at age 24 weeks, but not before 24 weeks
    • Must be 8 weeks after 2nd dose
ACIP and CDC Recommendations

CDC recommends that all delivery hospitals institute standing orders or admission orders, and protocols to ensure healthcare professionals:

- Administer hepatitis B vaccine to **all newborns** before they are discharged from the hospital
- Identify all infants born to mothers who are hepatitis B surface antigen (HBsAg) positive or to mothers with unknown HBsAg status. Administer appropriate immunoprophylaxis to these infants.

Endorsed by:
- American Academy of Pediatrics
- American Academy of Family Physicians
- American College of Obstetricians and Gynecologists

Impact of PEP on Newborns

- The recommended PEP and completion of the HBV series for infants born to HBsAg (+) mothers is estimated to be **90-95%** effective at preventing perinatal transmission of HBV

- Without HBIG, administering the 3-dose schedule is still estimated to be **70-90%** effective in preventing perinatal transmission

- Delaying hepatitis B vaccination until follow-up visit may be too late to prevent perinatal HBV transmission.
Importance of Universal Birth Dose

Universal Birth Dose serves as a safety net for infants whose mother’s HBsAg+ status is unknown or incorrect at time of birth
- Minimize risk of vertical transmission
- Minimize risk of horizontal transmission
- Minimize risk from medical errors

Hepatitis B Birth Dose Coverage

(Hepatitis B Birth Dose Coverage Rate
New York City, CIR
Jan 2012 to Jun 2012)
NYS Birth Dose Hospital Initiative

- Established in 2003 to remove the cost barrier for hospitals and providers
  - Free hepatitis B vaccine to any birthing hospital in NYS that agrees to adopt universal hepatitis B birth dose policy
  - 2008, 100% of birthing hospitals in NYS (not including NYC) signed onto the initiative
  - Currently, there are 25 of the 45 birthing hospitals in NYC who are enrolled in the program

Barriers to Universal Birth Dose

- Perceived low risk population
- Vaccine offered rather than a standing order
- Lack of implementation of hospital policies
- Nursing staff do not have time to educate at time of delivery
- Outpatient setting allows physicians to bill
- Preference for combination vaccine
- Parents are concerned about giving vaccine at birth
- Cultural/Linguistic barriers limit discussion
NYS Hepatitis B Birth Dose Initiative

- Survey conducted in 2010 among hospitals with high coverage to investigate best practices
  - Childbirth classes include information on Hep B vaccine
  - Vaccine information statement provided and consent to vaccinate obtained prior to birth
  - Time and place of administration: along with vitamin K and erythromycin ophthalmic ointment
  - Staff education and identifying staff resistance
  - Special populations: provide culturally and linguistically appropriate materials
  - Provision of vaccine: free through this initiative, eliminates cost barrier

Next Steps in Birth Dose

- Complete picture of the current statistics on hospital policies
- Hospital Survey 2012-2013; 71 responses received/19 responses pending
- Follow up with low coverage hospitals and identify barriers
  - Implement standing orders
  - Electronic reporting on birth certificate
- IAC Hepatitis B Prevention information for hospitals
- Continue to enroll hospitals in the NYS Birth Dose Initiative
  - Free birth dose hepatitis B vaccine for all newborns
- Partner with ACOG to convey the public health message
- Educate pregnant women about the hepatitis B vaccine
- Identify and enroll physicians who can champion the cause